REMARKS

This Amendment is in response to the Office Action mailed on September 19, 2008. Claims 1, 6 and 7 are amended. Claim 1 is amended to include features of claim 3. Claim 6 is supported, for example, in the specification on page 16, line 25-page 17, line 11. Claims 7 is supported, for example, in the specification on page 13, line 22-page 14, line 26. Claim 3 is cancelled without prejudice or disclaimer. No new matter is added. Claims 1, 2 and 4-7 are pending.

§102 Rejections:

Claims 1, 3 and 4 are rejected as being anticipated by Savord (US Patent No. 6,013,032). This rejection is traversed.

Claim 1 is directed to an ultrasonic diagnostic system that requires, among other features, a sub-beam former that imparts a delay time to only one of the first signal and the second signal to impart a delay time difference corresponding to a quarter of one period of the received signal between the first signal and the second signal by delay means provided inside. Similarly, claim 4 is also directed to an ultrasonic diagnostic system that requires, among other features, a sub-beam former imparts a predetermined phase shift amount to one of the first signal and the second signal by phase shift means provided inside.

Savord does not disclose or suggest these features. Savord is directed to an ultrasound imaging system in which a two-dimensional array formed from a plurality of sub-arrays is provided. However, nowhere does Savord disclose or suggest imparting a delay time difference between a first signal and a second signal. Accordingly, with respect to claim 1, nowhere does Savord disclose or suggest a sub-beam former that imparts a delay time to only one of the first signal and the second signal to impart a delay time difference corresponding to a quarter of one period of the received signal between the first signal and the second signal by delay means provided inside. Also, with respect to claim 4, nowhere does Savord disclose or suggest a sub-beam former that imparts a predetermined phase shift amount to one of the first signal and the second signal by phase shift means provided inside. For at least these reasons claims 1 and 4 are not disclosed by Savord and should be allowed.

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§103 Rejections:

Claims 2 and 5-7 are rejected as being unpatentable over Savord. This rejection is traversed.

Claim 6 is directed to an ultrasonic diagnostic system that requires, among other features, a delay means for delaying either one of an output signal of the first main beam former and an output signal of the second main beam former so that a delay time difference corresponding to a quarter of one period of the received signal occurs between the output signal of the first main beam former and the output signal of the second main beam former. Similarly, claim 7 is also directed to an ultrasonic diagnostic system that requires, among other features, a phase shift means for imparting a phase shift amount to either one of an output signal of the first main beam former and an output signal of the second main beam former so that a phase difference of 90 degrees occurs between the output signal of the first main beam former and the output signal of the second main beam former.

Savord does not teach or suggest these features. As discussed above, nowhere does Savord disclose or suggest imparting a delay time difference between a first signal and a second signal. Accordingly, with respect to claim 6, nowhere does Savord teach or suggest a delay means for delaying either one of an output signal of the first main beam former and an output signal of the second main beam former so that a delay time difference corresponding to a quarter of one period of the received signal occurs between the output signal of the first main beam former and the output signal of the second main beam former. Also, with respect to claim 7, nowhere does Savord teach or suggest a phase shift means for imparting a phase shift amount to either one of an output signal of the first main beam former and an output signal of the second main beam former so that a phase difference of 90 degrees occurs between the output signal of the first main beam former and the output signal of the second main beam former. For at least these reasons claims 6 and 7 are not suggested by Savord and should be allowed.

Claim 2 depends from claim 1 and should be allowed for at least the same reasons discussed above with respect to claim 1. Also, claim 5 depends from claim 4 and should be allowed for at least the same reasons discussed above with respect to claim 4. Applicant does not concede the correctness of these rejections.

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Conclusion:

Applicant respectfully asserts that claims 1, 2 and 4-7 are in condition for allowance. If a telephone conference would be helpful in resolving any issues concerning this communication, please contact Applicants' primary attorney-of record, Douglas P. Mueller (Reg. No. 30,300), at (612) 455-3804.

53148
PATENT TRADEMARK OFFICE

Dated: December 17, 2008

Respectfully submitted,

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